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**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA**

CELGARD, LLC,

Plaintiff,

v.

TARGRAY TECHNOLOGY
INTERNATIONAL INC.,

Defendant.

Case No. 5:19-cv-02401-VKD

**CELGARD'S MOTION FOR A
PRELIMINARY INJUNCTION**

[REDACTED VERSION]

Date: July 30, 2019

Time: 10:00 am

Place: Courtroom 2

Judge: Judge Virginia K. DeMarchi

NOTICE OF MOTION

TO ALL PARTIES AND THEIR ATTORNEYS OF RECORD:

PLEASE TAKE NOTICE THAT on July 30, 2019, at 10:00 am, or as soon thereafter as this matter may be heard, in Courtroom 2 of the above-entitled Court, located at 280 South 1st Street, San Jose, CA 95113, Plaintiff Celgard LLC (“Celgard”) will, and hereby does, move for a preliminary injunction prohibiting Defendant Targray Technology International Inc. (“Targray”) from further infringement of U.S. Patent No. 6,432,586 (“the ’586 patent”) and thus from making, using, offering to sell, or selling within the United States, or importing into the United States, products that infringe the ’586 patent, including Targray’s SH416W14, SH416W22, SH216D14, and SH216D22 separators (“Accused Products”).

This motion is based on this Notice of Motion, the accompanying memorandum of points and authorities, the concurrently filed declarations of Dr. Ralph White and Ian McCallum, and all other papers and arguments submitted in connection with this matter and any matters of which the Court may take judicial notice.

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INTRODUCTION

Plaintiff Celgard is a global leader in the development and production of separators used in lithium-ion batteries for a variety of products, including consumer electronic devices and electric vehicles. Celgard’s leading market position is attributable, in large part, to its ’586 patent—a foundational patent on ceramic coated separators. Indeed, in presentations to customers, potential customers, and industry audiences, Celgard touts the ’586 patent as a major part of its success in the ceramic coated separator market.

Targray—a distributor of Chinese Shenzhen Senior Technology Material Co., Ltd.’s (“Senior’s”) ceramic coated separators—is importing into the U.S., offering for sale, and selling infringing copies of Celgard’s separators in the U.S. [REDACTED]

[REDACTED] This is threatening to destroy Celgard’s market share, its reputation and goodwill, which Celgard has worked so hard to achieve. The situation is becoming urgent, and therefore Celgard brings this preliminary injunction motion now to stop the ongoing infringement and significant and irreparable harm to Celgard [REDACTED] infringing separators being sold through Targray in the market.

STATEMENT OF ISSUES

Whether Celgard is entitled to a preliminary injunction enjoining Targray from making, using, offering to sell, or selling within the United States, or importing into the United States separators that infringe the ’586 patent and where Celgard is suffering irreparable harm from this infringement.

FACTUAL BACKGROUND

Celgard is a U.S.-based and an internationally well-known leader in the production of specialty battery materials. Declaration of Ian McCallum (“McCallum Decl.”) at ¶ 3. Celgard has a broad portfolio of highly engineered products used in this industry, and is one of the largest suppliers of separators to the lithium-ion battery industry. *Id.* Celgard’s separators are widely used in lithium-ion batteries for electric vehicles (“EVs”), energy storage systems, power tools, and consumer electronic (“CE”) devices, such as notebook computers, mobile telephones, and tablets.

Id. at ¶ 8. EVs include both hybrid EVs, like the Toyota Prius, and full-EVs like Teslas. *Id.* at ¶ 7.

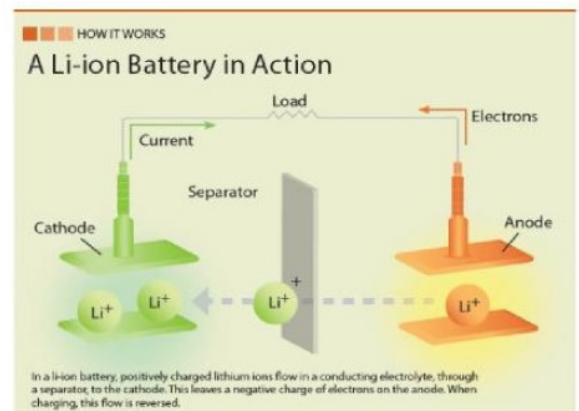
Celgard has invested hundreds of millions of dollars into research and development for new battery separator technologies and is an innovator in both coated and uncoated separators. *Id.* at ¶ 5. Celgard has also invested in significant intellectual property protection. *Id.* at ¶ 9. It owns all right, title, and interest in and to the '586 patent—a foundational patent in the separator field. *Id.* The '586 patent relates to ceramic coated separators for use in lithium-ion batteries. *Id.* This case concerns Chinese Senior's production of infringing copies of Celgard's separators, and Targray's offering for sale and sale of Senior's infringing separators in the U.S., including this district.

A. Introduction to the Technology

1. Rechargeable Lithium-Ion Batteries

In the past 20 years, rechargeable lithium-ion batteries became very popular for use in varying applications. Declaration of Celgard's technical expert, Dr. Ralph E. White ("White Decl.") at ¶ 24. Tesla's EVs, for example, depend on them to safely, reliably and continuously power its EVs. *Id.* Lithium-ion batteries provide a power source with a higher energy density, longer cycle-life, and higher operational-voltages with a relatively small size and light weight, as compared to other rechargeable batteries. *Id.* at ¶ 23.

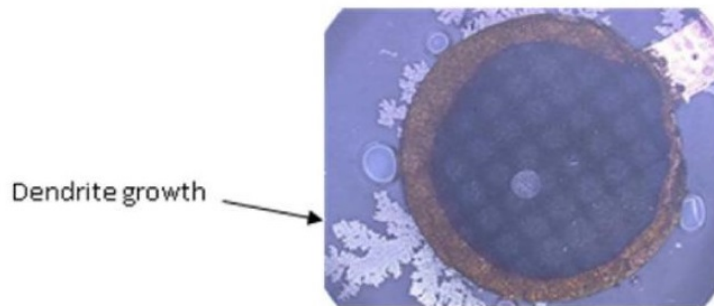
A typical lithium-ion battery cell (shown below) includes a positive electrode and a negative electrode that is divided by a separator or film, with the electrodes typically being made of compatible metal materials. *Id.* at ¶ 25. The electrodes and film are often soaked in (and reside in) a liquid-like electrolyte. *Id.* Lithium ions move through the electrolyte between the two electrodes when the battery is discharging its energy (e.g., when the battery is plugged into a device and energizing the device) and also between the two when the battery is charging (e.g., when the battery is plugged into a charging station). *Id.* at ¶ 26.



The separator prevents direct contact between the electrodes. *Id.* at ¶ 31. This is critical because the touching of the two electrodes typically results in a “short” of the cell and possibly in catastrophic failure such as fire or explosion. *Id.* at ¶¶ 41, 110. Therefore, by providing a barrier between the electrodes, the separator facilitates safety and continued operation of the battery. *Id.* at ¶¶ 30, 81. Separators made of various materials have been used over the years. *Id.* at ¶ 32. As batteries have become more sophisticated, separator function has also become more demanding and complex. *Id.* at ¶ 33.

2. Dendrite Growth

Dendrite growth refers to the irregular growth of a metal (like lithium) when it is plated onto an electrode during the charging of a battery, and is often illustrated by snowflake-like formations or patterns on a window. *Id.* at ¶¶ 35-36. The figure below shows an example of a metal plate having dendrite crystals formed on its surface. *Id.* at ¶ 36, Ex. 4.



Dendrite growth can be a problem in rechargeable lithium-ion batteries, occurring, for example, after repetitive charging and discharging or overcharging of the battery. *Id.* at ¶ 38. Dendrites can be deposited on an electrode, forming branches on a tree-like structure that extends from the first electrode towards the second. *Id.* at ¶¶ 38-41. In a conventional lithium-ion battery, the dendrite tree-like structure can continue to grow, penetrating the separator and making direct, physical contact with the second electrode. *Id.* at ¶ 41. When such contact is made, an electrical short circuit of the battery can occur, which can give rise to problems, including a non-functioning or mis-functioning battery or fire or explosion. *Id.* at ¶ 39, Ex. 14, at 3.

3. The '586 Patent

Dr. Zhang, one of Celgard’s research scientists, invented a new separator for use in batteries. *See generally* Dkt. 1, Ex. A (hereinafter “the ’586 patent”). Dr. Zhang’s patent, entitled “Separator

for a High Energy Rechargeable Lithium Battery,” describes and claims a separator for a high-energy rechargeable lithium battery that addresses the significant problem of dendrite growth between electrodes, as well as other problems. *Id.* Specifically, his invention is a separator for a high-energy, rechargeable lithium battery that has (a) a ceramic composite layer (or coating) including a mixture of inorganic particles in a matrix material, the layer being adapted to block dendrite growth and to prevent electronic shorting of the battery and (b) a polyolefinic microporous layer adapted to block ionic flow between an anode and cathode in the event of thermal runaway. *Id.* This invention significantly improved the performance of separators—a battery with this patented separator is less likely to fail, to catch fire or explode, or to experience an electronic short, and more likely to last longer. *See e.g.*, White Decl. ¶¶ 81, 84.

The ’586 patent issued on August 13, 2002 and will expire very soon, on April 10, 2020. *Id.* The Patent Office has confirmed the validity of claim 12, the claim at issue here, after *three* *inter partes* review challenges. ’586 patent at *Inter Partes* Certificate. On June 3, 2019, the validity of claim 12 was yet again confirmed in a reissue application.¹

B. The Market for Ceramic Coated Separators

Demand for ceramic coated separators continues to increase with the growing popularity of EVs and CEs that require reliable, safe, high-energy lithium-ion batteries. McCallum Decl. at ¶ 14. Access to this growing customer base is critical to a separator manufacturer’s long-term viability. *Id.* Being a part of the innovation cycle is crucial to companies like Celgard. *Id.* at ¶ 19.

1. The Electric-Vehicle Market

The market for plug-in EVs that use lithium-ion batteries is rapidly expanding with an increasing number of makes and models available for sale. *Id.* at ¶ 15. Global EV sales hit 2.1M units in 2018 (+63% year-over-year growth), and OEMs launched 95 new EV models in 2018 with more than 300 to follow in 2020. *Id.* Many EVs, such as plug-in hybrid EVs in the U.S. and China, have adopted ceramic coated separator technology. *Id.*

¹ The Notice of Allowance issued on June 3, 2019. The reissue patent will take effect upon issuance (likely in a few months) and, on that date, the original patent (the ’586 patent) will be considered surrendered. As soon as the reissue patent issues, Celgard will seek to amend the pleadings in this case to assert and rely on the reissued patent.

Vehicle manufacturers are rapidly increasing the number of available plug-in EVs as demand grows. *Id.* For example, General Motors (“GM”) has said it plans to introduce 20 new EV models by 2023. *Id.* In the midst of this growth, vehicle manufacturers continue to explore options for increasing the per-charge EV driving range, often using, or making plans to use, a ceramic coated separator to achieve this objective. *Id.* at ¶ 17.

A ceramic coated separator is very common in the vast majority of full-EVs (non-hybrids) operating in the U.S. *Id.* at ¶ 18. The success behind the growth of EVs is significantly correlated with longer per-charge driving range—a critical consumer criterion. *Id.* The longer per-charge driving ranges now available in today’s EVs are supported by very high energy density lithium-ion battery cells. *Id.* The characteristics of these types of lithium-ion battery cells typically lead cell design engineers to specify ceramic coated separators to help address a balance between performance (i.e., longer per-charge driving range) and safety. *Id.*

2. Battery Separator Supply Chain and Competition in the Ceramic Coated Separator Market

Tiered supply chains are the rule in the EV and CE industries, where the final product consists of many complex components and sub-assemblies that must comply with stringent quality, manufacturing, and business standards. *Id.* at ¶ 19. Celgard is an important member of the EV or CE tiered supply chain. As such, it typically supplies components to a battery supplier, who in turn supplies components directly to an original equipment manufacturer (OEM) that produces CE devices, EVs, or energy storage systems. *Id.*

Competition for battery sales does not occur on a unit-by-unit basis. *Id.* at ¶ 20. Rather, battery manufacturers compete to have EV or CE manufacturers use their batteries for an entire product line. *Id.* Supplying batteries and battery parts for EVs and CEs requires extensive testing and validation among the separator supplier, the battery manufacturer, and the EV or CE manufacturer. *Id.* Once selected, the battery manufacturers “design in” a particular separator for that “generation”—i.e., that model’s production life cycle—which, for EVs, lasts from two to five years, or more. *Id.* at ¶ 21. Because many batteries are designed to last for years, and because the ramifications of a battery fire or explosion are so dire, manufacturers tend to stick with a battery

design, and *a particular separator*, for a long time. *Id.* The successful battery manufacturer (and separator manufacturer) thereby procures a blocking position that immunizes it from competition for several years. *Id.* at ¶ 24.

Celgard’s experience in the EV market provides a good illustration. *Id.* at ¶ 27. Celgard often collaborates with its customers and potential customers to provide highly-engineered and specifically-designed separators for each customer or potential customer’s requirements. *Id.* at ¶¶ 22, 27. Typically, the selling process for a separator requires a series of meetings between the separator supplier, the battery producer, and sometimes the OEM where requirements are discussed, and sample separators are provided and evaluated. *Id.* at ¶ 22. These sample separators may be tested as isolated units, or they may be built into working batteries. *Id.* Following testing, the separator manufacturer (e.g., Celgard or competitors like Targray) may modify the separator, and the new separator and batteries built with it are retested. *Id.* This iterative process can continue for months or even years, and it can continue through the approval process, and even can be used to make continuous improvements to the product after it is launched. *Id.* Over time, relationships are developed among the supplier, the tiered customer and the OEM at many levels during this process. *Id.* at ¶ 27. Supplying components for an EV creates a familiarity and confidence that yields an “incumbency effect” that can carry over from one design cycle to the next. *Id.* This “incumbency effect” increases the likelihood that the tiered suppliers and OEM will continue to harvest their initial investment through future contracts. *Id.* Furthermore, through its experience in the EV industry, Celgard has learned that OEMs are more likely to look to their current suppliers for future designs, rather than to suppliers to which the OEMs have not already awarded business, and other OEMs are more likely to select suppliers they know. *Id.* All of this results in a strong competitive advantage for existing suppliers. *Id.* at ¶ 26.

3. Competition in the Chinese Market

The Chinese government is seeking to have China become the global leader in lithium-ion battery technology, as well as the leader in EV technology. *Id.* at ¶ 29. To facilitate these goals, the Chinese government provides subsidies for EVs, which in turn has caused demand for lithium-ion batteries to grow. *Id.* According to market research, there are over 75 competing

C. Chinese Senior Manufactures Infringing Copies of Celgard's Separators

[illegible]

Celgard is being significantly and irreparably harmed. *Id.* at ¶ 39.

Targray is Senior’s U.S. presence. *Id.* at ¶ 41. Targray imports into the U.S., offers to sell, and sells in the U.S. Senior’s infringing separators—including all the Accused Products. *Id.* For example, Targray says that “[w]e accompany battery manufacturers and researchers through every stage of the product development cycle, from early innovation to large-scale production.” *Id.* at ¶ 42. Accordingly, Targray is not simply a distributor of Senior’s infringing separators but works

1 closely with battery manufacturers to design products that incorporate Senior's infringing
2 separators. *Id.* By working on behalf of Senior, Targray builds the kind of long-term relationship
3 with battery manufacturers—Celgard's customers and potential customers—that Celgard desires.
4 *Id.* at ¶ 43.

5 Targray and Senior continue to have an increasingly significant presence in the global
6 market for ceramic coated separators, which is significantly and irreparably harming Celgard. *Id.*
7 at ¶ 47. One market report indicates that the global ceramic coated battery separator market was
8 \$792 million in 2018 and is expected to reach \$2.33 billion by the end of 2025 with a growth rate
9 of 16.7 % during 2019-2024. *Id.* at ¶ 53. Of the \$792 million for the global ceramic coated battery
10 separator market in 2018, the U.S market was over \$143 million—18% of the global revenue. *Id.*
11 The annual growth rate for North America is 16.6%. *Id.*

12 This market report indicates that Targray's global market share in ceramic coated separators
13 was 8.7% in 2018. *Id.* at ¶ 54. Of the \$792 million for the global ceramic coated battery separator
14 market, Targray's revenue was \$68.5 million. *Id.* Based on the percentage above that the U.S.
15 market is 18% of the global revenue, Targray's revenue attributable to the U.S. can be estimated to
16 be approximately \$12.3 million in 2018. *Id.* This is revenue that Celgard has lost due to the
17 infringing separators and demonstrates harm to Celgard that is significant and irreparable. *Id.*

18 Celgard estimates that due to Senior's conduct globally, Senior has or is taking away a total
19 of about [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED] This is significant and irreparable harm to Celgard. *Id.* [REDACTED]

24 [REDACTED]

25 [REDACTED]

26 [REDACTED]

27 As mentioned above, Celgard has recently lost one significant supply agreement due to the
28 infringing separators. *Id.* at ¶ 66. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] *Id.* at ¶ 39. Targray is assisting with this by distributing Senior’s infringing separators in the U.S. *Id.* In addition, based on Celgard’s knowledge of the way separators and battery cells are sourced in the lithium battery marketplace, Celgard infers that Targray is custom designing or modifying the battery separators, and batteries for specific customer applications. *Id.* at ¶ 42. This interaction is typically ongoing and occurs before, during and after launch of the product. *Id.* Any relationship it gains with a battery manufacturer or OEM in this market, [REDACTED] *Id.* at ¶ 63. Thus, each Targray sale of infringing separator results in not only a lost potential sale for Celgard but also a lost long term potential customer relationship and the opportunity to recover on its institutional investment in research, development, and intellectual property. *Id.*

LEGAL STANDARD

“The essential attribute of a patent grant is that it provides a right to exclude competitors from infringing the patent.” *Acumed LLC v. Stryker Corp.*, 551 F.3d 1323, 1328 (Fed. Cir. 2008) (citing 35 U.S.C. § 154(a)(1)). Thus, infringement may cause a patentee irreparable harm not remediable by a reasonable royalty, including harm “that no damages payment, however great, could address.” *Celsis In Vitro, Inc. v. CellzDirect, Inc.*, 664 F.3d 922, 930 (Fed. Cir. 2012). In cases of patent infringement, a court “may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable.” 35 U.S.C. § 283. Courts, including this Court, have issued preliminary injunctions in

patent cases when the circumstances, such as those present here, justify such relief. *See e.g., BlackBerry Ltd. v. Typo Prods. LLC*, No. 14-cv-00023-WHO, 2014 U.S. Dist. LEXIS 42702 (N.D. Cal. Mar. 28, 2014) (granting a preliminary injunction); *Lifescan, Inc. v. Shasta Techs., LLC*, 933 F. Supp. 2d 1243 (N.D. Cal. Mar. 19, 2013), *rev'd and remanded on other grounds*, 734 F.3d 1361 (Fed. Cir. 2013) (granting a preliminary injunction that was later reversed on patent exhaustion grounds); *Apple, Inc. v. Samsung Elecs. Co.*, No. 11-cv-01846, 2012 U.S. Dist. LEXIS 88436 (N.D. Cal. June 26, 2012) (granting a preliminary injunction).

Courts consider four factors in deciding whether to grant preliminary injunctive relief: (1) likelihood of success on the merits, (2) irreparable harm in the absence of preliminary relief, (3) the balance of equities, and (4) the public interest. *Trebro Mfg., Inc. v. FireFly Equip., LLC*, 748 F.3d 1159, 1165 (Fed. Cir. 2014). Each factor favors preliminary injunctive relief in this case.

ARGUMENT

A. CELGARD IS LIKELY TO SUCCEED ON THE MERITS OF ITS CLAIM

The evidence shows that Celgard is likely to succeed on the merits at trial. To establish likelihood of success on the merits, Celgard must show (1) it will likely prove infringement of one or more claims of the patent and (2) if validity is challenged, that the infringed claim is likely valid. *Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1374 (Fed. Cir. 2006). An accused infringer cannot defeat a patentee's showing of likelihood of success on the merits without raising a "substantial question" concerning infringement or validity. *Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341, 1364 (Fed. Cir. 2008). Here, the Accused Products infringe claim 12 of the '586 patent and there are no validity issues—in fact, its validity has been tested and confirmed *four* times.

4. The Accused Products Infringe the '586 Patent

Targray's use, importation, sale, offer for sale, distribution and importation of the Accused Products into the U.S. infringe claim 12 of the '586 patent.

a. Claim 12 Does Not Present Any Terms Requiring Construction

An infringement analysis requires two steps. First the court construes the claims. Second, the court must compare the properly construed claims to the accused product to determine if the plaintiff is likely to meet its burden of proving infringement by a preponderance of the evidence.

Pfizer, Inc. v. Teva Pharms. USA, Inc., 429 F.3d 1364, 1372 (Fed. Cir. 2005).

Here, there are no terms that require construction for purposes of awarding a preliminary injunction, and there is infringement under any reasonable claim construction. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (claim construction is not an “obligatory exercise in redundancy” and is only appropriate to “clarify and when necessary to explain what the patentee covered by the claims”). There should be no dispute about the meaning of claim terms in claim 12. They are ordinary terms understood by those skilled in the relevant art in light of the specification of the patent. *See Biotec Biologische Naturverpackungen GmbH & Co. KG v. Biocorp, Inc.*, 249 F.3d 1341, 1349 (Fed. Cir. 2001) (“[T]he meaning of ‘melting’ does not appear to have required ‘construction,’ or to depart from its ordinary meaning.”); *Mentor H/S, Inc. v. Medical Device Alliance, Inc.*, 244 F.3d 1365, 1380 (Fed. Cir. 2001) (holding that district court properly instructed the jury to use ordinary meanings for “irrigating” and “frictional heat”).

b. Celgard is Likely to Prove at Trial That the Accused Products Infringe Claim 12 of the ’586 Patent

Infringement is present when an accused product contains every limitation or its equivalent in the asserted claim. *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1301 (Fed. Cir. 2011). “An element in the accused product is equivalent to a claim limitation if the differences between the two are ‘insubstantial’ to one of ordinary skill in the art.” *Eagle Comtronics, Inc. v. Arrow Commun. Labs., Inc.*, 305 F.3d 1303, 1315 (Fed. Cir. 2002). “The known interchangeability of substitutes for an element of a patent is one of the express objective factors . . . bearing upon whether the accused device is substantially the same as the patented invention.” *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 36 (1997). Equivalence can also be demonstrated by showing a limitation exists in the accused product that performs substantially the same function, in substantially the same way, to achieve substantially the same result, as disclosed in the claim. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950). The Accused Products²

² The analysis below refers to only Targray’s SH416W14 and SH216D22 separators, but applies equally to the remaining Accused Products, i.e., Targray’s SH416W22 and SH216D14 separators. White Decl. at ¶ 134.

infringe claim 12 of the '586 patent either literally or under the doctrine of equivalents. This is detailed in Dr. White's declaration, an infringement claim chart, exhibits, as well as testing results set forth in the McCallum declaration. White Decl. at ¶¶ 45-134; McCallum Decl. at ¶¶ 75-78.

"at least one ceramic composite layer or coating"

The Accused Products are ceramic composite coated separators, as confirmed by Targray product literature. White Decl. at ¶¶ 64-67. For example, for Accused Product SH416W14, the product literature refers to it as "*Ceramic-coated* Wet Process Polyethylene Separators (SW)--High-performance Separators." *Id.* at ¶ 65 (emphasis added).

"said layer including a mixture of 20-95% by weight of inorganic particles selected from the group consisting of SiO₂, Al₂O₃, CaCO₃, TiO₂, SiS₂, SiPO₄, and mixtures thereof"

The Accused Products contain inorganic particles made up of Al₂O₃, which is the formula for aluminum oxide. White Decl. at ¶¶ 68-72. For example, for Accused Product SH416W14, the product literature states: "Our SW separators are also available with *aluminum oxide ceramic coating* to further enhance safety characteristics." *Id.* at ¶ 69 (emphasis added).

In addition, SEM images of Celgard's testing reveal that the ceramic coated layer of the Accused Products contains approximately 5-7% of binders, and thus the remainder of the layer—the inorganic particles—is 93-95%, which is within the claimed 20-95% range. *Id.* at ¶ 71.

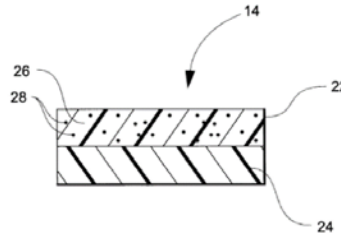
"and 5-80% by weight of a matrix material selected from the group consisting of polyethylene oxide, polyvinylidene fluoride, polytetrafluoroethylene, copolymers of the foregoing, and mixtures thereof"

The Accused Products contain 5-80% weight [REDACTED] which is interchangeable with polyethylene oxide, polyvinylidene fluoride, or polytetrafluoroethylene. *Id.* at ¶¶ 75, 77. As a binder or glue,³ each of these materials bind the inorganic materials to create the ceramic composite layer that contributes to blocking dendrite growth and preventing electronic shorting. *Id.* at ¶ 81.

The matrix material (or binder) recited in claim 12 (i.e., polyethylene oxide, polyvinylidene fluoride, and polytetrafluoroethylene) is an adhesion agent that binds or "glues" the ceramic

³ One of ordinary skill in the art appreciates that the term "binder" refers to an adhesion agent—in common parlance, a "glue." White Decl. at ¶ 82.

particles directly and/or indirectly together and/or to a polyolefin layer. *Id.* at ¶ 81. For example, the '586 patent describes that the matrix material “[has] inorganic particles 28 dispersed therethrough,” and Figure 2 of the '586 patent shows the adhesion of the particles 28 directly and/or indirectly together and/or to the polyolefin layer 24 through the matrix material 26:



Id. at ¶ 83. The matrix material is necessary for the physical stability of the separator—without a binder acting as an adhesion agent, the aluminum oxide particles would separate from each other and/or from the polyolefinic layer, and the separator would not be functional. *Id.* at ¶¶ 81, 91. “The matrix material 26 of layer 22 differs from the foregoing polymer matrix [] in, at least, *function*. Namely, matrix material 26 is that component of a separator, which in part, *prevents electronic shorting* by preventing dendrite growth.” *Id.* at ¶¶ 81, 86-90; Ex. 7 at 3:15-19. Accordingly, providing adhesion is part of the matrix material’s function, and gluing is a “way” the matrix works. *Id.* at ¶¶ 82-83, 91-94. “Results” achieved at least in part by the adhesion of the particles include contributing to preventing electronic shorting and preventing ensuing thermal runaway and thus enhancing safety, and improving cycling efficiency. *Id.* at ¶¶ 95-102, Ex. 7 at 1:31-35.

The [REDACTED] is an adhesion agent that binds the inorganic particles directly and/or indirectly together and/or to a polyolefin layer. *Id.* at ¶¶ 82-83, 91-94. This is confirmed in the SEM images of the Accused Products. *Id.* at ¶ 91; Ex. 15 at 3, 10. This material contributes to the increased safety of the Accused Products. *Id.* One of ordinary skill in the art [REDACTED]

[REDACTED] *Id.* at ¶ 104. This is further confirmed by Celgard’s separator, which embodies the '586 patent and lists the '586 patent on its data sheet, [REDACTED]. *Id.* at ¶¶ 77-78, 104-108. Moreover, Chinese Patent Publication CN109728233 explains [REDACTED]

[REDACTED] Thus, the matrix material in the Accused Products is insubstantially different from the claimed

matrix material and can be used interchangeably with any of the claimed materials. *Id.* at ¶ 108.
“said layer being adapted to at least block dendrite growth and to prevent electronic shorting; and”

As discussed above, the Accused Products contain a ceramic composite layer. This layer, which contains inorganic particles bound together by the matrix material (or binder), acts to prevent dendrite growth and to prevent electronic shorting. White Decl. at ¶¶ 109-113. Product literature discusses that the predicate for safety in the Accused Products is the ceramic composite layer’s ability to block dendrite growth, and hence to prevent electronic shorting. *Id.*

“at least one polyolefinic microporous layer,”

The Accused Products contain a polyolefinic microporous layer. *Id.* at ¶¶ 114-117. For example, for Accused Product SH416W14, Targray’s product literature identifies this model as a “Ceramic-coated Wet Process *Polyethylene* Separator.” *Id.* at ¶ 115 (emphasis added). For Accused Product SH216D22, the product literature notes that “[o]ur dry process *polypropylene* separators are also available with aluminum oxide ceramic coating to further enhance safety characteristics.” *Id.* at ¶ 116 (emphasis added). Polyethylene and polypropylene are polyolefins, and are identified in the SEM images included in Dr. White’s declaration. *Id.* at ¶ 117.

“having a porosity in the range of 20-80%,”

The Accused Products, which contain either a polyethylene or polypropylene layer, have a porosity in the claimed range of 20-80%. *Id.* at ¶¶ 118-120. For example, product literature for Accused Product SH416W14 states that the porosity is 40 +/- 3 %. *Id.* at ¶ 119. Product literature for Accused Product SH216D22 states that the porosity is 42 +/- 3 %. *Id.* at ¶ 120.

“an average pore size in the range of 0.02 to 2 microns,”

The SEM images from the testing of the Accused Products show the average pore size to be approximately 0.1 micron, which falls within the claimed range. *Id.* at ¶¶ 121-123.

“and a Gurley Number⁴ in the range of 15 to 150 sec,”

The Accused Products have a Gurley number in the range of 15 to 150 sec. *Id.* at ¶¶ 124-128. For example, product literature shows that Accused Product SH416W14 has a Gurley number

⁴ The ’586 patent defines the Gurley number as “the time it takes for 10 cc [ml] of air at 12.2 inches of water to pass through one square inch of membrane.” White Decl. at ¶ 125.

of 232 sec/100 ml. *Id.* at ¶ 126. When converted to a 10 ml measure—as taught in the ’586 patent—the 232 sec/100 ml becomes 23.2 sec, which falls within the claimed range. *Id.*

“said layer being adapted to block ionic flow between an anode and a cathode.”

The ’586 patent identifies polyethylene and polypropylene as preferred materials, whose properties block ionic flow between an anode and a cathode during thermal runaway. *Id.* at ¶ 130, Ex. 7 at 2:57-60; 5:5-7. This blocking occurs when the temperature of the cell rises to the melting point of the polyolefin layer, which causes the layer’s pores to close and thus block the flow of lithium ions. *Id.* When ions stop flowing, the source of heat in the cell is removed, and the cell is said to “shut down.” *Id.*

As discussed above, the Accused Products use either porous polyethylene or polypropylene, and therefore block ionic flow between an anode and a cathode during thermal runaway. *Id.* at ¶¶ 129-132. This is confirmed by the fact that the Accused Products have listed shutdown temperatures. *Id.* For example, Accused Product SH416W14 has a shutdown temperature of 144°C, and Accused Product SH216D22 has a shutdown temperature of 165°C. *Id.* at ¶¶ 131, 132. When the shutdown temperatures of the Accused Products are reached, the pores in the polyolefinic layer (polyethylene or polypropylene) close, blocking ionic flow. *Id.*

In sum, because the Accused Products contain every limitation of claim 12, either literally or under the doctrine of equivalents, Celgard is likely to prevail at trial on infringement. *Uniloc USA, Inc.*, 632 F.3d at 1301. Therefore, this factor weighs heavily in favor of granting Celgard’s motion for a preliminary injunction.

2. The ’586 Patent Is Presumed Valid

Celgard presumptively satisfies the second prong of the likelihood-of-success factor because the ’586 patent is presumed valid. “[A] patent is presumed valid, and this presumption exists at every stage of the litigation,” including in a preliminary injunction proceeding. *Sanofi-Synthelabo*, 470 F.3d at 1375; 35 U.S.C. § 282. The statutory presumption alone establishes a likelihood of success on the issue of validity. *See Canon Comput. Sys., Inc. v. Nu-Kote Int’l, Inc.*, 134 F.3d 1085, 1088 (Fed. Cir. 1998); *Purdue Pharma L.P. v. Boehringer Ingelheim GmbH*, 237 F.3d 1359, 1365 (Fed. Cir. 2001). But claim 12 of the ’586 patent has been challenged *three* times

in *inter partes* review proceedings with different prior art, and has been found valid *each time*. '586 patent at *Inter Partes* Review Certificate. In addition, the validity of claim 12 has been recently confirmed again in a reissue application. Accordingly, claim 12 of the '586 patent is likely to be held valid in this case.

B. TARGRAY'S INFRINGEMENT IS IRREPARABLY HARMING CELGARD

Celgard has already suffered significant irreparable harm, and is likely to continue to suffer significant irreparable harm if Targray is not enjoined. Courts have repeatedly found that "price erosion, damage to ongoing customer relationships, loss of customer goodwill (e.g., when an effort is later made to restore the original price), and loss of business opportunities" support a finding of irreparable harm in patent infringement cases. *Celsis*, 664 F.3d at 930, 932 (affirming district court's statement that "[t]here is no effective way to measure the loss of sales or potential growth—to ascertain the people who do not knock on the door or to identify the specific persons who do not reorder because of the existence of the infringer"); *see also Abbott Labs.*, 544 F.3d at 1362 (affirming the grant of a preliminary injunction and stating that "loss of revenue, goodwill, and research and development support constitute irreparable harm"); *Robert Bosch LLC v. Pylon Mfg. Co.*, 659 F.3d 1142, 1150-51 (Fed. Cir. 2011) (finding irreparable harm and reversing the denial of a permanent injunction). Loss of market share and loss of access to customers are also pertinent factors that support a finding of irreparable harm in patent cases. *Trebro*, 748 F.3d at 1170. "So long as there is a significant threat of harm, a preliminary injunction may issue regardless of the magnitude of the harm." *QBAS Co. v. C Walters Intercoastal Corp.*, No. SACV 10-406 AG (MLGx), 2010 U.S. Dist. LEXIS 143945, at *31 (C.D. Cal. Dec. 16, 2010).

The types of harm existing here are precisely the harms found by courts to constitute irreparable harm warranting preliminary injunctive relief. The parties are in direct competition for supply of separators, and the lithium-ion battery industry places a high premium on innovative distinctiveness and long-term relationships with suppliers. In such a situation, Targray's offers for sale and sales of infringing separators [REDACTED] [REDACTED] in the U.S. has had and will continue to have a devastating effect on Celgard's sales, its market share, as well as its reputation and goodwill.

1 [REDACTED]
2 [REDACTED]
3 [REDACTED] McCallum Decl. at ¶ 70. Absent an immediate injunction, Targray's
4 continued sales of infringing separators while this case is pending will irreparably harm Celgard.
5 This factor weighs heavily in favor of preliminary injunctive relief.

6 **1. Targray's Infringement is [REDACTED] and Lost Sales**

7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED] and has caused significant harm to Celgard. *Id.* at ¶ 36; *see Canon,*
11 *Inc. v. GCC Int'l Ltd.*, 263 F. App'x 57, 62 (Fed. Cir. 2008). [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]

17 even if the Accused Products are eventually removed from the market. *Id.* Attempting to do so
18 would cause significant anger and resentment in the industry. *Id.* As a result, sales of infringing
19 separators by Targray will cause [REDACTED] *Id.* Also,
20 because the Accused Products are direct competitors to Celgard's patented separators, those
21 infringing separators have a particularly large and direct impact upon Celgard. *Id.*; *see Bosch*, 659
22 F.3d at 1149-50 (noting that irreparable harm is more easily found when the parties are direct
23 competitors in the same market).

24 The Court in [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED]
28 [REDACTED]

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED] Indeed, if the infringing separators are not removed from the
5 marketplace, [REDACTED]
6 [REDACTED] the harm caused by Targray's infringing sales is thus likely
7 to be longstanding, if not permanent. *Id.*

8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 **2. Targray's Infringement is Causing Celgard to Lose its Market Share,
Business Opportunities, its Competitive Edge, and Customers**

13 In a market "[w]here two companies are in competition against one another, the patentee
14 suffers the harm—often irreparable—of being forced to compete against products that incorporate
15 and infringe its own patented inventions." *Douglas Dynamics, LLC v. Buyers Prods. Co.*, 717 F.3d
16 1336, 1345 (Fed. Cir. 2013). "Direct competition in the same market is certainly one factor
17 suggesting" the "strong[] . . . potential for irreparable harm" absent injunctive relief. *Presidio
18 Components, Inc. v. Am. Tech. Ceramics Corp.*, 702 F.3d 1351, 1363 (Fed. Cir. 2012). That is
19 because in a confined and "niche" market such as the separator market here, each sale made by
20 Targray of infringing separators is "essentially a lost sale" to Celgard, which necessarily results in
21 a lost customer, and subsequent loss of market share, which is not remediable by money damages.
22 McCallum Decl. at ¶ 58; *see Trebro*, 748 F.3d at 1170 (finding that where parties occupied a small
23 market, loss of market share and customers from which plaintiff could not likely recover constituted
24 irreparable harm).

25 The irreparable harm is particularly strong here where Celgard is a leader in the market for
26 separators. McCallum Decl. at ¶ 3. As a market leader, Celgard enjoys a preeminent position, to
27 which other companies aspire. However, Senior (through Targray) is seeking to drive Celgard [REDACTED]
28

1 [REDACTED] *Id.* at
2 ¶ 39. This will continue to sharply reduce Celgard’s market share and jeopardize its position as the
3 market leader. *Id.* Indeed, in 2018, Targray had 8.7% of the global market share and its revenue
4 was \$68.5 million. *Id.* at ¶ 54. Based on the U.S. market being 18% of the global market, Targray’s
5 revenue attributable to the United States is estimated to be \$12.3 million for 2018. *Id.* This
6 demonstrates significant and irreparable harm to Celgard.

7 Moreover, [REDACTED]
8 [REDACTED]
9 [REDACTED] *Id.* at ¶ 59. [REDACTED]
10 [REDACTED]
11 [REDACTED] *Id.* at ¶ 60. This
12 continued loss of market share due to the infringing products is significant and is irreparably
13 harming Celgard in a way that cannot be compensated through an award of money damages. *Id.* at
14 ¶ 62; *see Bosch*, 659 F.3d at 1151; *Purdue Pharma*, 237 F.3d at 1368.

15 Additionally, because of the tiered supply chain for the EV and CE industries, lost sales and
16 market share are immeasurable and will permanently harm Celgard. McCallum Decl. at ¶ 62; *see*.
17 *Cordelia Lighting, Inc. v. Zhejiang Yankon Grp. Co. Ltd.*, No. EDCV 14-881 JGB (SPx), 2015 U.S.
18 Dist. LEXIS 189725, at *23 n.2 (C.D. Cal. Apr. 27, 2015) (noting loss of market share to a
19 competitor or the permanent loss of customers as a result of infringing conduct may support a
20 finding of irreparable harm). This is especially true in light of the upcoming expiration of the ’586
21 patent in April, 2020. McCallum Decl. at ¶ 64. That is because once an EV or CE manufacturer
22 approves of using a certain battery with a certain separator, that market is essentially locked up for
23 years. *Id.* at ¶ 24. Once a product is approved by a manufacturer, changes cannot readily be made
24 without re-seeking approval through a lengthy qualification process. *Id.* Therefore, absent a
25 preliminary injunction, Targray’s infringement could shut Celgard out of the EV and CE markets
26 for years, if not permanently. *Id.* The harm is compounded by the accelerating growth of markets
27 like EVs that use lithium-ion batteries.

28 Additionally, in a market characterized by so-called “design win” scenarios where a chosen

supplier's component is essentially designed into the OEM product for its lifecycle, an infringing supplier (like Targray) gains an "incumbency advantage," making it more likely to be chosen by the manufacturer in future design cycles, placing Celgard at an unfair and persistent competitive disadvantage. *Id.* at ¶¶ 25-27; *see also Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1337 (Fed. Cir. 2013) ("[I]n a design wins market, there is an incumbency effect which enhances a winning supplier's ability to successfully compete in successive design competitions."); *Sealant Sys. Int'l, Inc. v. TEK Global S.R.L.*, No. 5:11-cv-00774-PSG, 2014 U.S. Dist. LEXIS 31528, at *97 (N.D. Cal. Mar. 7, 2014) ("The incumbency benefits springing from design wins based on sales of infringing product favor a finding of irreparable harm."). The Federal Circuit has recognized that in such a market, "exclusion from a fair opportunity to compete for design wins constitutes irreparable harm." *Emulex*, 732 F.3d at 1337.

Here, the incumbency effect is particularly acute, as EV manufacturers generally do not redesign their products from scratch from one EV platform to the next. McCallum Decl. at ¶ 26. Rather, they are more likely to continue to harvest their initial investment in a design by awarding work to suppliers that already supplied components for earlier models, particularly after having developed a familiarity with and confidence in that supplier. *Id.* Further, securing customer loyalty is especially important in an emerging and rapidly accelerating market like the EV market. *Id.* at ¶ 14; *see Bendix Commercial Vehicle Sys., LLC v. Haldex Brake Prods. Corp.*, No. 1:09 CV 176, 2011 U.S. Dist. LEXIS 312, at *18 (N.D. Ohio Jan. 3, 2011) (granting injunction, as enforcing plaintiffs exclusive patent rights could "increase the customer loyalty of Plaintiff's existing customers," which "is especially important in a market that both parties agreed is heading into a period of tremendous growth"). Targray's improper use of Celgard's intellectual property thus permits Targray to gain "unwarranted additional business" from battery manufacturers who in turn gain business from EV manufacturers, which harms Celgard and places it at an unfair competitive disadvantage in future product cycles. *See Sealant Sys.*, 2014 U.S. Dist. LEXIS 31528, at *97 (noting that, "[a]bsent equitable relief, [plaintiffs] face an uphill battle to retake market share it should not have ceded").

When Celgard loses a sale due to Targray's infringement, it does not simply lose profits, it

loses customers, for years and potentially permanently. McCallum Decl. at ¶ 46. In a market with few customers, that loss is particularly significant. *See, e.g., Trebro*, 748 F.3d at 1170 (finding irreparable harm resulting from infringement in three-competitor market, noting “opportunities to attract customers and make sales are thus scarce in this tight market,” such that “every sale to FireFly is essentially a lost sale to Trebro. This lost sale also translates into a lost customer” (internal citations omitted)).

In a “design-win” market, an infringing supplier, such as Targray, also deprives Celgard of the opportunity to closely collaborate with a manufacturer, which provides insight into the manufacturer’s technical requirements and future plans, thereby allowing the supplier to better compete for business. McCallum Decl. at ¶ 27. In the EV market, insights as to manufacturer’s needs and specifications can be applied to future projects, which provides incumbent infringing suppliers (like Targray) a tremendous competitive advantage. *Id.* Here, by using Celgard’s intellectual property to capture business, Targray deprives Celgard of the opportunity to gain insight about manufacturers that can be used to obtain future business. *Id.* This irreparably harms Celgard, especially given that the ’586 patent is close to its expiration date. *Id.* at ¶¶ 63-64.

As a timely example, [REDACTED]

[REDACTED] *Id.* at ¶ 71. This is why Targray must be stopped from any further infringement of Celgard’s patent now.

3. Targray’s Infringement is Harming Celgard’s Reputation and Goodwill

Celgard is also likely to suffer great injury to its reputation and goodwill without an injunction. “The possibility that the patentee will suffer ‘erosion in reputation and brand distinction’ is relevant to a showing of irreparable harm.” *Asetek Danmark, A/S v. CMI USA, Inc.*, No. 13-cv-457-JST, 2015 U.S. Dist. LEXIS 127832, at *42-43 (N.D. Cal. Sept. 22, 2015) (internal citation omitted); *see also Celsis*, 664 F.3d at 930-931 (“Price erosion, loss of goodwill, damage to reputation, and loss of business opportunities are all valid grounds for finding irreparable harm.”).

diminishes the distinctiveness and market lure of Celgard's patented separators, as Targray and Senior can claim the features and functionality of the infringing separators as its own and occupy the market without acknowledging that its separators blatantly infringe on the rights of Celgard. Celgard has been on the market for many years with a proven track record in the battery separator market. McCallum Decl. at ¶ 6. Its research and development relating to EVs in particular have been praised by numerous high-ranking U.S. officials. *Id.* at ¶ 11. Targray's and Senior's infringing separators cut into Celgard's entire business and very identity. *Id.* at ¶ 39. Sales of these infringing separators in place of Celgard's separators at [REDACTED] [REDACTED] undermining the goodwill that Celgard worked so hard to develop. *Id.* at ¶ 70. This resulting harm to Celgard would be difficult or impossible to quantify, and would occur even if Celgard [REDACTED] *Id.* Celgard's reputation for innovation will be irreparably damaged if Targray is allowed to continue to sell infringing copies of Celgard's patented separators in the U.S. during the pendency of this litigation, thereby dulling Celgard's competitive edge as an innovator with a unique separator. *Id.*

4. Loss of the Right to Exclude & Expiration of the '586 Patent

Celgard has invested significant resources in developing the technology behind the '586 patent and has pursued enforcement of the '586 patent. McCallum Decl. at ¶¶ 5, 9. Sales of infringing copies of Celgard's separators by Targray [REDACTED] [REDACTED] deprive Celgard of the principal value of its patent, *i.e.*, the right to exclude infringers. Indeed, "[a]bsent a preliminary injunction, [Celgard] would lose the value of [the] patent" *Celsis*, 664 F.3d at 931; *see also Martek Biosciences Corp. v. Nutrinova, Inc.*, 520 F. Supp. 2d 537, 558-59 (D. Del. 2007) (the statutory right to exclude is a "benefit associated with patent rights that cannot be quantified in monetary damages.").

Where, as here, Celgard and Targray directly compete, then "[m]onetary damages generally are not an adequate remedy against future infringement because the central value of holding a patent is the right to exclude others from using the patented product." *Smith & Nephew, Inc. v. Synthes (U.S.A.)*, 466 F. Supp. 2d 978, 984 (W.D. Tenn. 2006). The parties to this case "are head-to-head

competitors, and [Celgard] has a right, granted by Congress, not to assist its rival with the use of proprietary technology.” *Novozymes A/S v. Genencor Int’l, Inc.*, 474 F. Supp. 2d 592, 613 (D. Del. 2007).

Failure to enjoin Targray’s infringement would compound the harm to Celgard, as third parties would be emboldened to infringe and [REDACTED] further undermining Celgard’s right to exclude and its reputation amongst customers as an innovator with robust intellectual property rights. *Smith Int’l, Inc. v. Hughes Tool Co.*, 718 F.2d 1573, 1581 (Fed. Cir. 1983), vacated on other grounds (noting that “to permit infringement during pendency of suit would be to grant a license valid as long as the infringer could contest the suit, and encourage others to infringe as well”) (internal citation omitted); *Douglas Dynamics*, 717 F.3d at 1345 (noting plaintiff would suffer irreparable harm to reputation absent injunction if plaintiff’s “dealers and distributors believed it did not enforce its intellectual property rights”).

In sum, money damages simply cannot remedy the long-term impact that Targray’s infringement will have on Celgard’s ability to compete. The harm is particularly great where, as here, [REDACTED] the ’586 patent is about to expire. The fact that trial—on a normal timetable—would come too late for an injunction to be available is, itself, a form of irreparable harm. Absent injunctive relief, the substantial and irreparable harm Celgard will incur before final judgment “defy attempts at valuation” because Targray’s infringing acts will have significantly changed the market in the interim and leave Celgard without an adequate remedy at law.

C. THE BALANCE OF HARDSHIPS WEIGHS IN FAVOR OF AN INJUNCTION

The balance of hardships overwhelmingly favors Celgard. This factor “assesses the relative effect of granting or denying an injunction on the parties” *i4i Ltd. P’ship v. Microsoft Corp* 598 F.3d 831, 862 (Fed Cir. 2010). “[T]he balance considered is only between a plaintiff and a defendant.” *Acumed LLC v. Stryker Corp.*, 551 F.3d 1323, 1330 (Fed. Cir. 2008). Courts properly consider facts like the parties’ sizes, products, and revenue sources. *i4i*, 598 F.3d at 862. However, courts do not consider an infringer’s investments in infringing products, its sunk development costs,

1 or its commercial success. *Id.* at 863. This is because “[o]ne who elects to build a business on a
2 product found to infringe cannot be heard to complain if an injunction against continuing
3 infringement destroys the business so elected.” *Acumed*, 551 F.3d at 1330 (internal quotations and
4 citations omitted).

5 Absent an injunction, Celgard will incur severe, irreparable harm. By comparison, any
6 impact on Targray will be limited. Here, Targray has made no investment in separator research or
7 manufacturing. Instead, Targray repackages and resells Senior’s separators. Targray is attempting
8 to break into the tiered battery manufacturer space in a significant way. McCallum Decl. at ¶¶ 44-
9 45. An injunction will help maintain the status quo in the market, preventing Targray from
10 irreparably harming Celgard by improperly taking market share from Celgard and [REDACTED]

11 [REDACTED] Should an injunction not issue, Celgard will be irreparably harmed by
12 continued market [REDACTED] potentially emboldening third parties’ infringement into
13 Celgard’s main business: separators. And an injunction that “ultimately prevents an upstream
14 misappropriator from profiting from its alleged theft of protected technology by limiting the
15 downstream user is not a hardship because it simply prevents the misappropriator from doing that
16 which the law already prohibits.” *Celgard, LLC v. LG Chem, Ltd. et al.*, No. 3:14-cv-43, 2014 U.S.
17 Dist. LEXIS 100928, at *15 (W.D.N.C. July 18, 2014) (internal quotations and citations omitted).

18 **D. THE PUBLIC INTEREST WEIGHS IN FAVOR OF AN INJUNCTION**

19 Finally, the public interest weighs in favor of Celgard because the strong public policy
20 favoring enforcement of valid patent rights outweighs any concerns about impacting competition.
21 When considering the public interest, courts consider whether “an injunction, both in scope and
22 effect, strikes a workable balance between protecting the patentee’s rights and protecting the public
23 from the injunction’s adverse effects.” *i4i*, 598 F.3d at 863. In making this determination, courts
24 heavily weigh the public’s interest in encouraging innovation through enforcement of patents.
25 *Abbott Labs.*, 544 F.3d at 1362-63. These interests typically outweigh claims that an injunction will
26 harm competition. Specifically, faced with arguments that granting a preliminary injunction will
27 take a competitor out of the market, courts recognize that Congress already has decided that
28 encouraging innovation through grant and enforcement of patent rights “reflects the congressional

balance of interests, and warrants weight in considering the public interest.” *Id.* at 1362; *see also Morris & Assocs., Inc. v. Cooling & Applied Tech., Inc.*, No. 5:09-CV-23-BR, 2010 U.S. Dist. LEXIS 111945, at *29-30 (E.D.N.C. July 30, 2010) (finding preliminary injunction “further[s] [the] public policy inherent in the patent laws designed to encourage useful inventions by rewarding the inventor with a period of market exclusivity”) (internal citation omitted).

Indeed, in the context of a permanent injunction, the Federal Circuit noted that although competition serves a public interest, an infringer could unfairly [REDACTED] [REDACTED] In such situations, “the public has a greater interest in acquiring new technology through the protections provided [REDACTED] [REDACTED]

By comparison, courts have found public interest favors the infringer where significant harm to the public, such as to public health, are at risk. *See, e.g., Cordis Corp. v. Boston Sci. Corp.*, 99 Fed. App’x 928, 935 (Fed. Cir. 2004) (upholding denial of injunction due to strong public health interest in allowing physicians access to broad choice of treatments). As one court noted, “rarely will the public interest be seriously affected by the grant or denial of an injunction” except for critical interests like public health or national security. *Pentair Water Pool & Spa, Inc. v. Hayward Indus., Inc.*, No. 5:11-cv-459-F, 2012 U.S. Dist. LEXIS 7096, at *26 (E.D.N.C. Jan. 23, 2012). This is not the case; Targray can point to no serious public harm that would result from enjoining its infringement, including prohibiting its sales of infringing separators. Any impact on competition is outweighed by the public interest in upholding patent rights and the incentives to innovate.

CONCLUSION

For the foregoing reasons, Celgard respectfully requests that the Court grant Celgard’s Motion for a Preliminary Injunction during the early pendency of this litigation.

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